

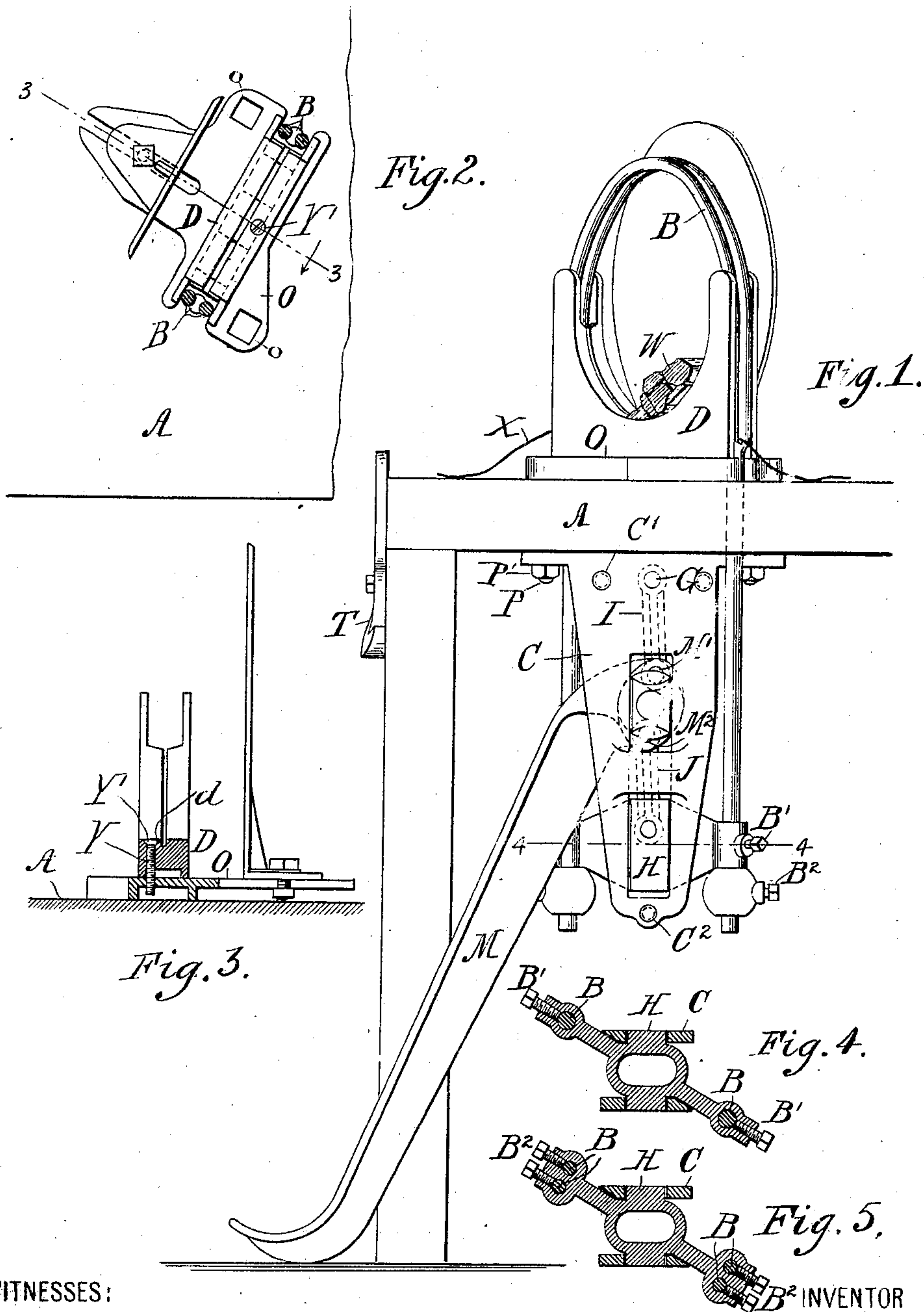
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Patented Sept. 17, 1901.

D. A. GREENE.
WOOD BUNDLING MACHINE.

(Application filed Apr. 2, 1901.)

(No Model.)



WITNESSES:

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DARWIN A. GREENE, OF BROOKLYN, NEW YORK.

WOOD-BUNDLING MACHINE.

SPECIFICATION forming part of Letters Patent No. 682,848, dated September 17, 1901.

Application filed April 2, 1901. Serial No. 54,007. (No model.)

To all whom it may concern:

Be it known that I, DARWIN A. GREENE, a citizen of the United States, residing in the borough of Brooklyn, in the city and State of New York, have invented a certain new and useful Improvement in Wood-Bundling Machines; and I do hereby declare that the following is a full and exact description thereof.

The invention may apply to machines considerably varied in style. I will describe it as applied to a machine of the form shown in the patent to me dated February 26, 1884, No. 294,125.

I provide in addition to the long-approved means for changing the size of the bundle by adjusting the bows up and down a provision for instantly changing by large increments previously and definitely determined.

There are many reasons, varying in different localities with the kinds of wood, the length to which it is sawed, and the prices, which make it expedient to change not only by small slowly-effected increments by turning nuts and to extents determined by elaborate and skilful observation of marks, but suddenly and strongly to exactly-defined amounts, and after treating a few hundred cords of a different size to return at once definitely and promptly to the previous size. My invention provides for doing this in places where the light is feeble and where the introduction of strong closely-applied artificial light among so much finely-divided kiln-dried wood might involve serious objection and raise the rate of insurance.

My invention consists in a provision for changing the height of the upper and effective surface of the cradle by making it distinct from the lower portion and secured thereto by a single readily-detachable fastening. A set of five or other required number of different sizes of cradle-tops being at hand properly marked or otherwise distinguished, as by painting with different colors, the machine can work on spruce slabs or other saw-mill waste an hour or a week and return again with certainty to a different quality and size without any supervision.

The following is what I consider the best means of carrying out the invention.

The accompanying drawings form a part of this specification.

Figure 1 is a side elevation with a few of the pieces of wood in position which are to constitute the bundle. Fig. 2 is a plan view of the main parts with the bows in horizontal section. Fig. 3 is a vertical section on the line 3 3 in Fig. 2. Fig. 4 is a horizontal section through certain portions on the line 4 4 in Fig. 1. Fig. 5 is a corresponding horizontal section showing a modification.

Similar letters of reference indicate corresponding parts in all the figures where they appear.

A is the bench.

D is the upper and O the lower portion of the divided cradle. The lower portion is tapped to receive a machine-screw Y, having a conical-based flat head Y', which screw is inserted through a corresponding hole *d* in the upper part and is sunk flush.

B represents the ordinary bows, which extend over the space for the bundle, and B' B² are the provisions for holding them.

C is the lower frame, which I sometimes denominate the "press." It is formed in two parts, united by the bolts C' C². The pin G in the top of the press C serves as the stationary portion or abutment of the toggle-link I.

M is a foot-lever, and M' the pivot therein, which connects to the lower end of the said upper link.

J is the lower link. Its upper end is knuckled to the lever M at M² and its lower end is knuckled to the cross-head H, to which latter the bows B are stiffly but adjustably united by the screws B' B².

The attendant places a string in the ordinary deep cross-groove in the upper part D of the cradle and piles the short pieces W of wood in the cradle until the space for the bundle is filled up to the bows. Then he liberates the lever M from the supporting-catch T and throws his weight on it and depresses it by a single movement or by several successive jerks. Then he ties the compacted bundle, and then releases the lever M and aids it to rise. Raising the free end of the lever M raises the bows and allows the properly-secured bundle to be removed. The lever is then held up by the catch T, and the operation is repeated. If it is desired to raise or lower the bows B, this may be done to any required extent by adjusting them up or down

in their bearings in the cross-head H and again properly tightening the pinching-screws B' B². When great changes are required in size, I provide a number of top pieces D for the cradle, each differing from the others in height and, if desired, in the curvature of its upper surface, and taking out the screw Y liberate the top D, previously used, tilt it to about forty-five degrees, and partially twist it around to disengage it from the bows and remove it, springing the bows somewhat, if necessary, to allow such removal, and supply another by a reverse of these movements, and insert and tighten the screw Y again. This change will, without other changes, give the required size to the bundles thereafter made, and when it is desired to return to the former size the operation is reversed. There may be changes also in the adjustment of the bows B, if required. With some forms of the parts it is necessary to remove the bows D to make such exchanges. In such case it is but little trouble to resecure them in higher or lower positions; but they may usually be returned to the identical position previously occupied and the changes made to depend entirely on the substitution of one for another of the tops D.

The metal portions are secured to the wood bench with great firmness and durability, thus avoiding all liability to work loose under the great racking strain. In the patent of 1884 the under part or press is secured only by bolting to the wood of the bench and in practice becomes loosened by the jumping on the lever. In the present construction the bolt-heads take hold of the extended metal top O and are received each in a square recess *o* in the latter, (see Fig. 2,) and the nuts P' on the lower ends of the bolts engage with a strong flange on the lower portion C of the press. (See Fig. 1.) The massive wood of the bench A is embraced between the extended iron parts. This construction both gives great bearing-surface to receive the pressure of the bolts and engages so as to hold against turning. The union is absolutely firm and will endure indefinitely.

Care should be taken to so proportion the parts that the top D of the cradle can be allowed to tilt and turn, as described, to be inserted and be removed. If in any case it cannot be thus inserted and removed, the bows must be temporarily removed by slackening the screws B' B²; but this is undesirable because it involves not only labor in removing and resecuring the bows, but also a loss of the certainty that the bows are set in the same position as before. The vertical

groove at each side of the top D which receives the bows being a little deepened at the upper and lower ends will always allow the top to be tilted enough to permit its introduction and removal while the lever M is up without disturbing the set of the bows.

Modifications may be made without departing from the principle or sacrificing the advantages of the invention. The bows are necessarily two where they extend over the bundles to allow the cord X to be brought around and tied between to make the best work; but the bows may be welded together, as shown, or may be otherwise joined at their lower ends, or, if desired, they may be distinct separate rods throughout, the provisions for receiving and strongly holding them in the cross-head H being correspondingly modified. Fig. 3 shows such construction.

I claim as my invention—

1. In a wood-bundler, the combination with the bows B and lever M and its connections for strongly moving the bows and a cradle together and apart to uniform extents, the cradle D O in two parts with means Y Y' for releasing, exchanging and confining them adapted to allow of easy and rapid changes in the sizes of bundles to certain previously-determined extents, all substantially as herein specified.

2. In a wood-bundler, the combination with the bows B and lever M and its connections for strongly moving the bows and a cradle together and apart to uniform extents the cradle D O in two parts with means Y Y' for releasing exchanging and confining them and also with means B' B² for adjusting the bows to large or small extents, all substantially as herein specified.

3. In a wood-bundling machine having a portion of the iron framework below and another portion above a wood bench A, and having the upper portion serving as the cradle made in two parts D O with means Y Y' for confining releasing and exchanging them, the holding-bolts P having their heads sunk in corresponding recesses *o* in the portion O and extending down through the bench and engaging by nuts P' with the lower frame C, all adapted to serve substantially as herein specified.

In testimony that I claim the invention above set forth I affix my signature in presence of two witnesses.

DARWIN A. GREENE.

Witnesses:

J. B. CLAUTICE,
PHILIP H. FETT.